

Appendix A – Amended Claims

1 - 61 (canceled)

62. (currently amended) A herbicide-resistant hybrid rice plant produced by the process of:

(a) crossing or back-crossing the rice plant having ATCC accession number PTA-904 with other rice germplasm;

(b) growing rice plants resulting from said crossing or back-crossing in the presence of at least one herbicidally-effective imidazolinone at levels of the imidazolinone herbicide that would normally inhibit the growth of a rice plant; and

(c) selecting for further ~~propagation, as hybrids or as varieties,~~ propagation hybrid rice plants resulting from said crossing or back-crossing, wherein the hybrid rice plants selected are plants that grow without significant injury in the presence of the imidazolinone herbicide;

wherein:

(d) said herbicide-resistant hybrid rice plant expresses a mutant acetohydroxyacid synthase whose enzymatic activity is directly resistant to normally-inhibitory levels of a herbicidally-effective imidazolinone;

(e) said herbicide-resistant hybrid rice plant is resistant to each of the following imidazolinone herbicides, at levels of the imidazolinone herbicides that would normally inhibit the growth of a rice plant: imazethapyr, imazapic, imazaquin, imazamox, and imazapyr;

(f) said herbicide-resistant hybrid rice plant is resistant to each of the following sulfonylurea herbicides, at levels of the sulfonylurea herbicides that would normally inhibit the growth of a rice plant: nicosulfuron, metsulfuron methyl, thifensulfuron methyl, and tribenuron methyl; and

(g) said herbicide-resistant hybrid rice plant is sensitive to each of the following sulfonylurea herbicides, at levels of the sulfonylurea herbicides that would normally inhibit the growth of a rice plant: sulfometuron methyl, chlorimuron ethyl, and rimsulfuron.

63. (withdrawn) A process for controlling weeds in the vicinity of a rice plant as recited in Claim 62, said process comprising applying a herbicide to the weeds and to the rice plant, wherein the herbicide normally inhibits acetohydroxyacid synthase, at levels of the herbicide that would normally inhibit the growth of a rice plant.

64 - 68. (canceled)

69. (withdrawn) A process for controlling weeds in the vicinity of a rice plant as recited in Claim 62, said process comprising applying to the weeds and to the rice plant at least one herbicide selected from the group consisting of imazethapyr, imazapic, imazapyr, nicosulfuron, imazaquin, imazamox, metsulfuron methyl, thifensulfuron methyl, tribenuron methyl, and pyriithiobac sodium; at levels of the herbicide that would normally inhibit the growth of a rice plant.

70. (canceled)

71. (withdrawn, and also currently amended) A process for breeding herbicide resistant hybrid rice plants, said process comprising the steps of:

(a) crossing or back-crossing the rice plant having ATCC accession number PTA-904 with other rice germplasm;

(b) growing rice plants resulting from said crossing or back-crossing in the presence of at least one herbicidally-effective imidazolinone, at levels of the imidazolinone herbicide that would normally inhibit the growth of a rice plant; and

(c) selecting for further ~~propagation, as hybrids or as varieties, propagation~~ hybrid rice plants resulting from said crossing or back-crossing, wherein the hybrid rice plants selected are plants that grow without significant injury in the presence of the imidazolinone herbicide;

wherein:

(d) the selected herbicide-resistant hybrid rice plants express a mutant acetohydroxyacid synthase whose enzymatic activity is directly resistant to normally-inhibitory levels of a herbicidally-effective imidazolinone;

(e) the selected herbicide-resistant hybrid rice plants are resistant to each of the following imidazolinone herbicides, at levels of the imidazolinone herbicides that would normally inhibit the growth of a rice plant: imazethapyr, imazapic, imazaquin, imazamox, and imazapyr;

(f) the selected herbicide-resistant hybrid rice plants are resistant to each of the following sulfonylurea herbicides, at levels of the sulfonylurea herbicides

that would normally inhibit the growth of a rice plant: nicosulfuron, metsulfuron methyl, thifensulfuron methyl, and tribenuron methyl; and

(g) ~~said~~ the selected herbicide-resistant hybrid rice plant is sensitive to each of the following sulfonylurea herbicides, at levels of the sulfonylurea herbicides that would normally inhibit the growth of a rice plant: sulfometuron methyl, chlorimuron ethyl, and rimsulfuron.

72. (withdrawn) The process recited in Claim 71, wherein the herbicide used in step **(c)** is selected from the group consisting of imazethapyr, imazapic, and imazapyr.

73 - 81 (canceled)

82. (withdrawn) The process recited in Claim 71, wherein the herbicide used in step **(c)** is selected from the group consisting of imazamox and imazaquin.

83 - 84. (canceled)

85. (withdrawn) A process as recited in Claim 63, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises a herbicidally-effective imidazolinone.

86. (withdrawn) A process as recited in Claim 85, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises imazethapyr.

87. (withdrawn) A process as recited in Claim 85, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises imazapic.

- 88.** (withdrawn) A process as recited in Claim 85, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises imazaquin.
- 89.** (withdrawn) A process as recited in Claim 85, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises imazamox.
- 90.** (withdrawn) A process as recited in Claim 85, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises imazapyr.
- 91.** (withdrawn) A process as recited in Claim 63, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises a herbicidally-effective sulfonyleurea.
- 92.** (withdrawn) A process as recited in Claim 91, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises nicosulfuron.
- 93.** (withdrawn) A process as recited in Claim 91, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises metsulfuron methyl.
- 94.** (withdrawn) A process as recited in Claim 91, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises thifensulfuron methyl.
- 95.** (withdrawn) A process as recited in Claim 91, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises tribenuron methyl.

- 96.** (new) A herbicide-resistant varietal rice plant produced by the process of:
- (a)** crossing or back-crossing the rice plant having ATCC accession number PTA-904 with other rice germplasm;
 - (b)** growing rice plants resulting from said crossing or back-crossing in the presence of at least one herbicidally-effective imidazolinone at levels of the imidazolinone herbicide that would normally inhibit the growth of a rice plant; and
 - (c)** selecting for further propagation varietal rice plants resulting from said crossing or back-crossing, wherein the varietal rice plants selected are plants that grow without significant injury in the presence of the imidazolinone herbicide;

wherein:

- (d)** said herbicide-resistant varietal rice plant expresses a mutant acetohydroxyacid synthase whose enzymatic activity is directly resistant to normally-inhibitory levels of a herbicidally-effective imidazolinone;
- (e)** said herbicide-resistant varietal rice plant is resistant to each of the following imidazolinone herbicides, at levels of the imidazolinone herbicides that would normally inhibit the growth of a rice plant: imazethapyr, imazapic, imazaquin, imazamox, and imazapyr;
- (f)** said herbicide-resistant varietal rice plant is resistant to each of the following sulfonylurea herbicides, at levels of the sulfonylurea herbicides that

would normally inhibit the growth of a rice plant: nicosulfuron, metsulfuron methyl, thifensulfuron methyl, and tribenuron methyl; and

(g) said herbicide-resistant varietal rice plant is sensitive to each of the following sulfonylurea herbicides, at levels of the sulfonylurea herbicides that would normally inhibit the growth of a rice plant: sulfometuron methyl, chlorimuron ethyl, and rimsulfuron.

97. (new) A process for controlling weeds in the vicinity of a rice plant as recited in Claim 96, said process comprising applying a herbicide to the weeds and to the rice plant, wherein the herbicide normally inhibits acetohydroxyacid synthase, at levels of the herbicide that would normally inhibit the growth of a rice plant.

98. (new) A process for controlling weeds in the vicinity of a rice plant as recited in Claim 96, said process comprising applying to the weeds and to the rice plant at least one herbicide selected from the group consisting of imazethapyr, imazapic, imazapyr, nicosulfuron, imazaquin, imazamox, metsulfuron methyl, thifensulfuron methyl, tribenuron methyl, and pyrithiobac sodium; at levels of the herbicide that would normally inhibit the growth of a rice plant.

99. (new) A process for breeding herbicide resistant varietal rice plants, said process comprising the steps of:

(a) crossing or back-crossing the rice plant having ATCC accession number PTA-904 with other rice germplasm;

(b) growing rice plants resulting from said crossing or back-crossing in the presence of at least one herbicidally-effective imidazolinone, at levels of the imidazolinone herbicide that would normally inhibit the growth of a rice plant; and

(c) selecting for further propagation varietal rice plants resulting from said crossing or back-crossing, wherein the varietal rice plants selected are plants that grow without significant injury in the presence of the imidazolinone herbicide;

wherein:

(d) the selected herbicide-resistant varietal rice plants express a mutant acetohydroxyacid synthase whose enzymatic activity is directly resistant to normally-inhibitory levels of a herbicidally-effective imidazolinone;

(e) the selected herbicide-resistant varietal rice plants are resistant to each of the following imidazolinone herbicides, at levels of the imidazolinone herbicides that would normally inhibit the growth of a rice plant: imazethapyr, imazapic, imazaquin, imazamox, and imazapyr;

(f) the selected herbicide-resistant varietal rice plants are resistant to each of the following sulfonylurea herbicides, at levels of the sulfonylurea herbicides

that would normally inhibit the growth of a rice plant: nicosulfuron, metsulfuron methyl, thifensulfuron methyl, and tribenuron methyl; and

(g) the selected herbicide-resistant varietal rice plant is sensitive to each of the following sulfonylurea herbicides, at levels of the sulfonylurea herbicides that would normally inhibit the growth of a rice plant: sulfometuron methyl, chlorimuron ethyl, and rimsulfuron.

100. (new) The process recited in Claim 99, wherein the herbicide used in step (c) is selected from the group consisting of imazethapyr, imazapic, and imazapyr.

101. (new) The process recited in Claim 99, wherein the herbicide used in step (c) is selected from the group consisting of imazamox and imazaquin.

102. (new) A process as recited in Claim 97, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises a herbicidally-effective imidazolinone.

103. (new) A process as recited in Claim 102, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises imazethapyr.

104. (new) A process as recited in Claim 102, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises imazapic.

105. (new) A process as recited in Claim 102, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises imazaquin.

106. (new) A process as recited in Claim 102, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises imazamox.

107. (new) A process as recited in Claim 102, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises imazapyr.

108. (new) A process as recited in Claim 97, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises a herbicidally-effective sulfonylurea.

109. (new) A process as recited in Claim 108, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises nicosulfuron.

110. (new) A process as recited in Claim 108, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises metsulfuron methyl.

111. (new) A process as recited in Claim 108, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises thifensulfuron methyl.

112. (new) A process as recited in Claim 108, wherein the herbicide that is applied to herbicide to the weeds and to the rice plant comprises tribenuron methyl.